

NISTTech**NONCONTACT RESONAMETER, PROCESS FOR MAKING AND USE OF SAME**

Docket: 14-036**Abstract**

Modern web, roll-to-roll, and liquid handling speeds typically approach kilometers per hour, continuously producing materials used in commercial applications for pharmaceutical, chemical, and materials manufacturing. These applications require specific materials properties, which often correlate to the conductivity and dielectric constant. While offline characterization techniques for conductivity and dielectric constant exist, they typically require contact with the materials or are destructive, making them unsuitable for inline testing and quality control. Here, we demonstrate a contactless, nondestructive microwave method for measuring dielectric constant and conductivity at microsecond time scales. Our invention surpasses industrial requirements for minimal measurement times by two orders of magnitude.

Status of Availability

This invention is available for licensing exclusively or non-exclusively in any field of use.

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